REMARKS

With the present Amendment, claims 1-13, 15, 17-20, 35-50, 52-56 and 58-62 are

pending in the present application. The rejection under 35 U.S.C. 101 is addressed

herein. The rejections under 35 U.S.C. 103 are respectfully traversed. However, in order

to further the prosecution of this application, the pending claims have been amended in

order to further distinguish them from the cited art. Support for the claim amendments

can be found throughout the specification and drawings. For example, support is found

in paragraphs 0010 and 0053 of US 2005/0003843 (published version of the present

application). By this amendment, some of the claims have been amended to preserve

consistencies. No new matter has been added. Applicants believe that the present

application as amended is now in condition for allowance of which prompt and favorable

action is respectfully requested.

35 U.S.C. 101 Rejection

Claim 62 is rejected under 35 U.S.C. 101 because giving its broadest and

reasonable interpretation of a claim drawn to a computer-readable storage medium

typically covers a form of non-transitory tangible media and transitory propagating signal

per se.

Claim 62 has been amended to recite a "non-transitory computer-readable

medium" and is now directed toward statutory matter. According to 1351 O.G. 212

(David J. Kappos "Subject Matter Eligibility of Computer Readable Media" dated

February 23, 2010), a recitation to a "non-transitory computer-readable medium" is under

the statutory subject matter of 35 U.S.C 101 and would overcome a 101 rejection based thereon. The amendment of the term "non-transitory" is not considered new matter even if the specification is silent.

Thus, Applicants respectfully request the withdrawal of the 101 rejections.

35 U.S.C. 103 Rejection

Claims 1-3, 5-8, 12, 13, 35-39, 41, 43-44, 52, 58 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parantainen (US 7,447,287) in view of Behtash et al. (US 5,745,480). Claims 4 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Parantainen (US 7,447,287) and Behtash (US 5,745,480) as applied above, and further in view of Ruutu et al. (US 2003/0123392). Claims 9-11, 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Parantainen (US 7,447,287) and Behtash (US 5,745,480) as applied above and further in view of Gopalakrishnan et al. (US 6,836,666). Claims 17-20, 49, 50, 55, 56 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Parantainen (US 7,447,287), Behtash (US 5,745,480)as applied above and further in view of Kadaba et al. (US 7,158,504)

The MPEP recited the standard to be applied in an issue of obviousness under 35 USC 103. Section 2143.03 of the MPEP states in part:

ALL CLAIM LIMITATIONS MUST BE CONSIDERED

> "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

As amended, the pending claims recite the element of "wherein the request for grant is received if a threshold amount of data is detected in buffers at the mobile station" or "to generate the request for transmission if a threshold amount of data is detected in the each buffer." Although the elements are presented here in quotes, the exact claim language may vary from claim to claim. Support for the claim amendments can be found throughout the specification and drawings, for example, in paragraphs 0010 and 0053 of the present application (US 2005/0003843).

> "In one embodiment, the request-grant process is event-driven. As the mobile station receives or generates data for a particular class of service, the data is stored in a buffer corresponding to that class of service. When the mobile station accumulates enough data in one of the buffers, the request is triggered. The frequency of requests is controlled in this embodiment by a signaling variable that specifies the minimum interval between two requests." *Present application (US 2005/0003843), paragraph 0053. Emphasis added.*

> "The system is configured to allocate reverse link resources using a request-grant mechanism. According to this mechanism, the mobile station accumulates data in one or more buffers. Each buffer stores data for a particular class of service. When the amount of data in one of the buffers reaches a threshold, the mobile station generates a request message and transmits this message to the base station. The base station receives the request message, as well as request messages from other mobile stations, and processes the requests to determine an allocation of the available reverse link resources." *Present application (US 2005/0003843), paragraph 0010. Emphasis added.*

Monitoring buffers and generating a request for grant if a threshold amount of data is detected in the buffers, ensures that the buffer contents are transmitted when the buffers are at capacity and thus potentially enables reducing the number of dropped packets.

On page 8 of the Office Action dated 11/27/2009, it states that "Parantainen, Gopalakrishnan and Kadaba either alone or in combination fails to teach wherein the

processing subsystem is configured to monitor the buffers and, for each buffer, to generate a request for transmission if a threshold amount of data is detected in the buffer." The cited secondary references, Behtash and Ruutu, do not make up for this deficiency for the reasons stated herein.

Behtash is directed towards simultaneously supporting several distributed user terminals that are connected to a central base station. Behtash is cited on pages 3-4 of the Office Action for disclosing "to make a determination whether or not to issue a grant to the mobile station (user terminal; Fig. 1, elements 104 - 106) in response to the request for grant (user terminal transmits a connection request message) to send a grant for the specific service class to the mobile station if a determination is made at the base station (base station; Fig. 1, element 102) to issue the grant (the base station receives the connection request message, that specifies bit rate and a particular QoS parameter, from the user terminal and the base station 102 responds with a connection response message granting the request), and to receive data for the specific service class transmitted according to the grant on a reverse link from the mobile station to the base station, wherein the base station is a serving base station (the user terminal accepts the connection by transmitting a connection accept message and communicates with the base station for the specific service class as indicated in the connection request message sent by the user terminal) (Col. 5, lines 57 - 33)." However, there is no disclosure of a buffer or memory in Behtash. And, there is no disclosure of monitoring a buffer or memory, or of taking an action based on surpassing a detected threshold associated with the buffer or memory. Thus, Behtash does not disclose the element of "wherein the request for grant is received if a threshold amount of data is detected in buffers at the mobile station" or the element

of "to generate the request for transmission if a threshold amount of data is detected in the each buffer" as recited in the pending claims.

Ruutu is directed towards using a Packet Data Convergence Protocol (PDCP) buffer in a PDCP layer or using a QoS scheduling algorithm in a Media Access Control (MAC) layer. Ruutu is cited on pages 6-7 of the Office Action for disclosing "wherein the determination is made at a MAC layer (MAC layer QoS scheduling function; Page 3, Paragraph 0039)." In contrast to the recited elements, Ruutu discloses either using an extra buffer memory or dropping data packets from the queue corresponding to the assigned buffer when an assigned buffer reaches capacity

> "To achieve the provision of the guaranteed channel quota, <u>push-out operations, i.e. dropping of data packets from the queues, are initiated for reasons of fairness between the active queues</u>. When such a push-out is initiated, later described longest-queue-drop and drop-from-front mechanisms may be initiated. Moreover, <u>one channel may use extra buffer memory after running out of its quota, which helps to reduce packet drops and thus improve the packet throughput</u>. The corresponding control of buffer allocation is performed by the buffer control functionality 11." *Ruutu (US 2003/0123392), paragraph 0044. Emphasis added.*

> "Thus, push-out operations can happen in the following two cases. <u>If a new channel is set up and there is no free buffer memory, a push-out action occurs, in which another channel drops one or more packets so that the new channel has enough memory space allocated for the first data packet.</u> Additionally, if an existing channel asks for more buffer memory and no free memory is available in the PDCP buffer 13, a push-out happens for another channel." *Ruutu (US 2003/0123392), paragraph 0049. Emphasis added.*

Ruutu discloses the contents of an overflowing buffer are either transferred to another buffer or dropped. There is no disclosure of transmitting a request for grant or transmission when the capacity of a buffer reaches a threshold and no disclosure of a request for transmission upon detecting overflow in the buffer. Thus, Ruutu does not disclose the element of "wherein the request for grant is received if a threshold amount of

data is detected in buffers at the mobile station" or the element of "to generate the request for transmission if a threshold amount of data is detected in the each buffer" as recited in the pending claims.

For the reasons stated, the cited references, either taken separately or in combination, do not disclose, suggest or make obvious all of the features of the pending claims and the 103 rejections based thereon should be withdrawn accordingly.

CONCLUSION

The rejection under 35 U.S.C. 101 is addressed herein. For the reasons stated above, the prior art references cited by the Office Action do not teach, disclose, suggest or make obvious the pending claims. Thus, Applicants respectfully request withdrawal of the 35 U.S.C.101 and 35 U.S.C.103 rejections based thereon.

ALLOWABLE SUBJECT MATTER

Applicants thank the Examiner for indicating the allowability of claims 14, 15, 46-50, 53, 54, 59 and 60. As the amendments made herein are believed to resolve the outstanding rejections of the remaining claims, all the pending claims are now believed to be allowable.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Applicants do not believe that any fees are due regarding this amendment. However, if any fees are required, please charge Deposit Account No. 17-0026. Applicants encourage the Examiner to telephone the Applicants' agent should any issues remain.

Respectfully submitted,

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